

## MEMORANDUM

**DATE:** August 15, 2016 **PROJECT NO.** 350.0065.001

**TO:** Sara Sparks, Remedial Project Officer, US Environmental Protection Agency (EPA)  
Keith Large, Montana Department of Environmental Quality (DEQ)

**FROM:** David Tooke, Project Coordinator  
Chris Cerquone, Principal in Charge

**SUBJECT:** Addendum No. 2 to the Remedial Investigation Work Plan, Additional Soil Sampling for PCBs at the High Density Pulp Tank Foundation and Transformer Storage Building Foundation Areas, Smurfit Stone/Frenchtown Mill, Missoula County, Montana

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This memorandum describes Addendum No. 2 to the Remedial Investigation Work Plan (RIWP; NewFields 2015a), dated November 2015, for the Smurfit Stone/Frenchtown Mill Site (**Figure 1; Attachment A**). This addendum covers additional soil sampling for polychlorinated biphenyls (PCBs) analysis in two discrete locations in Operable Unit 2 (OU2). Addendum No. 2 is prepared in general accordance with Section 46 of the Administrative Settlement Agreement and Order on Consent for Remedial Investigation/Feasibility Study (AOC) between the potentially responsible parties (PRPs; WestRock CP, LLC, International Paper Company, M2Green Redevelopment LLC) and the EPA, filed November 12, 2015.

## BACKGROUND

Thirty three (33) surface soil samples (depths up to 24-inches below ground surface) were obtained in December 2015 during the remedial investigation (RI) of OU2 and analyzed for PCBs. Work was completed in accordance with the RIWP and the Field Sampling Plan (FSP), included as Appendix D to the RIWP (NewFields 2015b). Analytical results indicated that one of the PCB congeners, Aroclor-1260, was detected in three samples in excess of the November 2015 EPA Industrial Direct Contact Regional Screening Level (RSL; 990 micrograms per kilogram [ $\mu\text{g}/\text{kg}$ ]) (USEPA 2015). These samples were obtained at the two areas shown on **Figure 2 (Attachment A)** and are described as follows:

- High Density Pulp Tank foundation – samples SS18-IN-(12) and SS19-IN-(24), collected at depths of 12- and 24-inches, exhibited Aroclor 1260 concentrations of 1,440  $\mu\text{g}/\text{kg}$  and 1,740  $\mu\text{g}/\text{kg}$  respectively.
- Transformer Storage Building foundation – sample SS28-IN-(0-2)c, collected as a composite sample over the interval from 0- to 2-inches had an Aroclor 1260 concentration of 7,490  $\mu\text{g}/\text{kg}$ .



Soil data collected in OU2 during the RI were discussed in a meeting between technical representatives of EPA, DEQ, PRPs and NewFields on April 28, 2016. The technical group proposed collecting additional soil samples to delineate the extent of the PCBs in the two areas listed above.

## SAMPLING AREA DESCRIPTIONS

The High Density Pulp Tank (HDPT) was present at the Site in November 2011 but had been removed by July 2013. A concrete ring foundation for the HDPT with an approximate diameter of 30 feet currently remains and is approximately 26-inches above grade. **Figure 3 (Attachment A)** shows the HDPT foundation and the location of soil samples SS18-IN-(12) and SS19-IN-(24) collected in December 2015.

The Transformer Storage Building (TSB) foundation has approximate dimensions of 40 by 24 feet. The TSB was present in September 2009 but removed by November 2011. **Figure 4 (Attachment A)** shows the TSB concrete foundation along with concrete slabs (pads) on the north and east sides of the foundation, and the location of soil sample SS28-IN-(0-2)c.

## PURPOSE

The objectives of additional investigation proximal to the HDPT and TSB foundations are to:

- Obtain soil samples at depths ranging from 1 to 4 feet at locations proximal to the December 2015 sampling locations at the HDPT and TSB.
- Analyze samples for PCBs (Aroclors) to delineate the lateral and vertical extent of elevated PCBs concentrations in soil.

## SCOPE OF WORK

The subsurface soil investigations planned for the two areas near foundations of the HDPT and TSB are described below.

### HDPT FOUNDATION AREA

**Figure 3** shows proposed locations for six soil samples; three within the HDPT ring foundation and three outside the foundation. Direct-push drilling techniques (e.g., Geoprobe®) will be used to obtain samples to depths of 4 feet in accordance with SOP-14 (NewFields 2015b), included in the RIWP. **Table 1 (Attachment B)** identifies sampling depths.

Decontaminated direct-push sampling rods lined with acetate sleeves will be advanced to 4 feet at each sampling location shown on **Figure 3**. Sample locations residing outside the tank foundation were determined during a site visit with NewFields, EPA, and MDEQ on August 2, 2016. Locations were selected to avoid areas with concrete surfaces. After the rods are retrieved and the sample sleeves removed, the recovered sample will be placed on a work table. The soil stratigraphy and percent



recovery from the retrieved sample sleeve will be recorded in accordance with Section 2.7.2.2 in the FSP (NewFields 2015b). The recovered sample may be less than 4 feet in length depending on subsurface soil conditions. Samples will be divided into four equal segments and soil material from the bottom of each quarter interval will be transferred into sample containers. Samples will be labeled as shown in **Table 1** (i.e., IN-HDPT38-SB1, -2, -3 and -4). Remaining sample material will be returned to the borehole and any remaining hole-space will be filled with bentonite.

Samples will be submitted to Pace Analytical Laboratories (Pace) in Minneapolis, Minnesota, for PCB (Aroclors) analysis according to EPA SW-846 Method 8082A (Table D-4, NewFields 2015b). Extraction will be completed on each sample within 7 days of collection. **Table 1** identifies samples that will be initially analyzed for PCBs (i.e., all samples collected at depths of 1, 2 and 3 feet from boreholes within the tank foundation and one sample outside the tank foundation), and other samples that will be held for potential PCB analysis. Additional sample analysis will be based on the following decision process:

- If the result of any initially analyzed sample in a borehole (e.g., samples collected at depths of 1, 2 and 3 feet from boreholes within the foundation) exceeds the RSL for Aroclor-1260 (990 µg/kg), the sample collected directly beneath that sample (ie: at 4 feet below ground surface) will be analyzed for PCBs.
- If the result for sample INHDPT41-SB collected from the upper 1-foot of a borehole outside the tank foundation exceeds the commercial RSL, then the sample from the upper 1-foot collected in the adjacent boreholes outside the foundation will be analyzed.
- Collected samples will continue to be analyzed with depth or distance until analytical results are below the commercial RSL.

### TSB FOUNDATION AREA

**Figure 4** shows proposed locations for seven soil samples located in an arch pattern, at distances of 5 and 10 feet, from the location of sample SS-28-IN(0-2)c. Sample IN-TSB44-SB will be located at the approximate location of sample SS-28-IN(0-2)c as shown on **Figure 4**. Subsurface soil samples will be obtained using direct-push drilling equipment at depths of 1, 2 and 3 feet in accordance with SOP-14 (NewFields 2015b). **Table 1 (Attachment B)** identifies samples and depths. In a site visit with EPA, MDEQ and NewFields on August 2, 2016, agencies determined the sump to be a closed system. During the visit, agencies agreed that additional sampling is not necessary to investigate potential PCB release from the closed sump.

Procedures to collect and describe sample lithology will be identical to those used for the HDPT investigation described above with one exception. The sample interval in the TSB foundation area is from 0 to 3 feet therefore, the sample recovered at each boring location will be divided into three equal segments and soil material from the bottom of each interval will be transferred into sample containers. Samples will be labelled as shown in **Table 1** (i.e., IN-TSB44-SB1, -2, and -3). Remaining sample material will be returned to the borehole. Any remaining hole-space will be filled with bentonite.



Samples will be submitted to Pace and extracted for potential PCB (Aroclors) analysis according to EPA SW-846 Method 8082A (Table D-4, NewFields 2015b). **Table 1** identifies samples that will be initially analyzed for PCBs (i.e., all samples collected at a depth of 1 foot, from the four boreholes nearest the foundation and sample location SS28-IN(0-2)c, and from the 2-foot depth for sample IN-TSB44-SB), and other samples that will be held for potential PCB analysis. Similar to process identified above for the HDPT investigation, if the result of any initially analyzed sample in a borehole exceeds the RSL for Aroclor-1260 (990 µg/kg), the sample collected directly beneath that sample will be analyzed for PCBs. If the result for samples collected in the upper 1-foot from the four boreholes nearest the foundation (i.e., IN-TSB44-SB, -45-SB, -46-SB and -47-SB) exceeds the commercial RSL, then the sample from the 1-foot depth in the nearest adjacent borehole will be analyzed. This decision-making process will be followed for all collected samples in depth or distance from sample location SS28-IN(0-2)c until analytical results are below the commercial RSL.

### QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

Up to 45 soil samples will be analyzed for PCBs (**Table 1**). Three types of quality control (QC) samples will be collected. Field duplicate (FD) samples will be collected as part of the investigation; one per 20 natural samples. Equipment rinse blanks (ERB) will be prepared during the investigations; one per 20 natural samples. One deionized rinse water field blank (DFB) will also be collected. Each of the QC samples will be submitted to Pace along with natural samples and analyzed for PCBs according to EPA SW-846 Method 8082A.

### HEALTH AND SAFETY

Field staff, including the drilling subcontractor, involved in sampling activities will conduct work in accordance with the approved Health & Safety Plan (Appendix F of the RIWP; NewFields 2015d).

### SCHEDULE AND DELIVERABLE

The soil investigations at the HDPT and TSB foundation areas are scheduled for the end of August, 2016 depending on the availability of a direct-push drilling subcontractor. Work will begin at the HDPT and conclude at the TSB. Field work is anticipated to be conducted over a two to three day period. Samples will be analyzed on standard analytical laboratory turn-around times. Analytical data are anticipated to be available approximately three to four weeks after receipt by the laboratory.

Analytical data will be verified and validated in accordance with the approved QAPP (Appendix E of the RIWP; NewFields 2015c). Results will be organized in a NewFields data management system (DMS) then uploaded to the SCRIBE project database in accordance with procedures outlined in the QAPP and a technical memorandum submitted to EPA on May 6, 2016 (NewFields 2016). Data verification/validation and uploading into NewFields' DMS is anticipated to be complete approximately



three weeks after receipt of laboratory results. Validated data will then be uploaded to a SCRIBE project database (approximately six weeks after the sampling event).

NewFields proposes to prepare a technical memorandum documenting the PCB investigations of the HDPT and TSB foundation areas. The memorandum would present soil lithology and PCB results in tabular and graphic formats. The approximate lateral and vertical extent of any PCB impacts to soil in both areas would be shown on figures, and field notes and sampling forms would be attached to the document. The memorandum would be submitted to EPA and DEQ on behalf of the PRPs approximately two weeks after data are uploaded into SCRIBE.

## REFERENCES

**NewFields, 2015a.** Remedial Investigation Work Plan, Smurfit Stone/Frenchtown Mill, Missoula County, Montana. Prepared for International Paper Company, M2Green Redevelopment, LLC, and WestRock CP, LLC. November.

**NewFields 2015b.** Field Sampling Plan for the Smurfit Stone / Frenchtown Mill Site, Missoula County, Montana. Version 2, 11/09/2015. Included as Appendix D of the Remedial Investigation Work Plan, November 2015.

**NewFields 2015c.** Quality Assurance Project Plan for the Smurfit Stone / Frenchtown Mill Site, Missoula County, Montana. Version 2, 11/05/2015. Included as Appendix E of the Remedial Investigation Work Plan, November 2015.

**NewFields 2015d.** Health and Safety Plan for the Smurfit Stone / Frenchtown Mill Site Remedial Investigation, Missoula County, Montana. Version 1.0, 11/10/2015. Included as Appendix F of the Remedial Investigation Work Plan, November 2015.

**NewFields, 2016.** Data Management Process Memorandum for the Smurfit Stone / Frenchtown Mill Site, Missoula County, Montana. Prepared for Respondents, to EPA and Montana DEQ. May 6, 2016. 9 p.

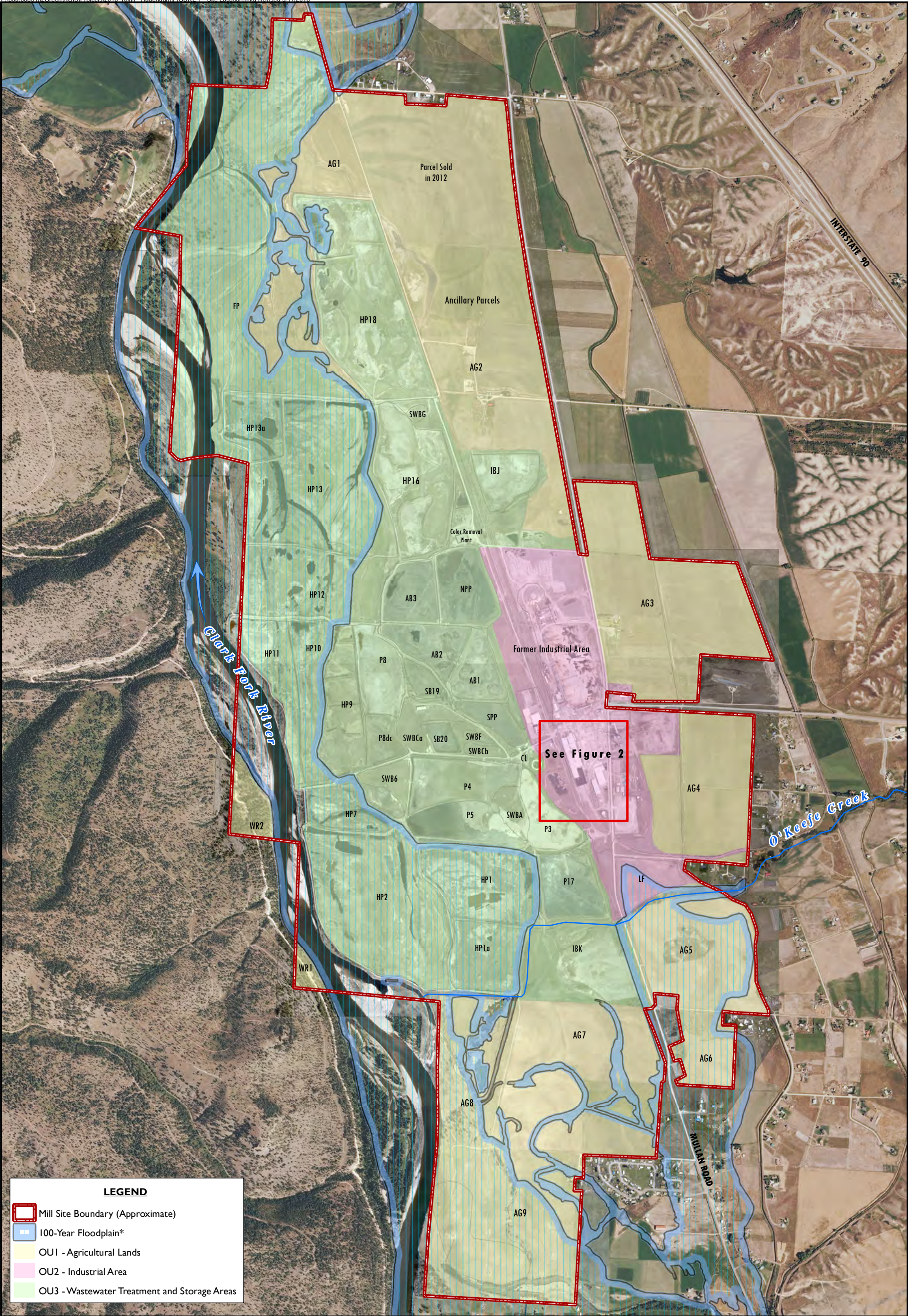
**USEPA. (2015).** United States Environmental Protection Agency Regional Screening Levels – Generic Tables, November. on-line. <http://www.epa.gov/region9/superfund/prg/>. Office of Superfund Remediation and Technology Innovation.

Attachment: A – Figures  
B – Table 1

# Attachment A

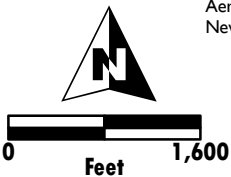
## Figures





**LEGEND**

- Mill Site Boundary (Approximate)
- 100-Year Floodplain\*
- OU1 - Agricultural Lands
- OU2 - Industrial Area
- OU3 - Wastewater Treatment and Storage Areas



NewFields

Aerial Photo Source: NAIP 2011 and Newfields 2016 (Within Site Boundary)

\*Floodplain Source:  
As defined by the Federal Emergency Management Agency (FEMA) 2013 Digital Flood Insurance Rate Map (DFIRM). (NFIP 2013)

**Notes**

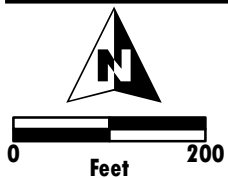
- |                                   |                            |
|-----------------------------------|----------------------------|
| AG - Agricultural Land            | NPP - North Polishing Pond |
| AB - Aeration Stabilization Basin | P - Settling Pond          |
| CL - Clarifier                    | SB - Spoils Basin          |
| FP - Flood Plain                  | SPP - South Polishing Pond |
| HP - Holding or Storage Pond      | SWB - Solid Waste Basin    |
| IB - Rapid Infiltration Basin     | WR - West of River         |
| LF - Landfarm                     |                            |

Site Location  
Former Frenchtown Mill Site  
Missoula County, Montana  
FIGURE 1





Aerial Photo Source: Newfields 2016



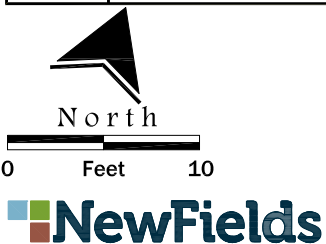
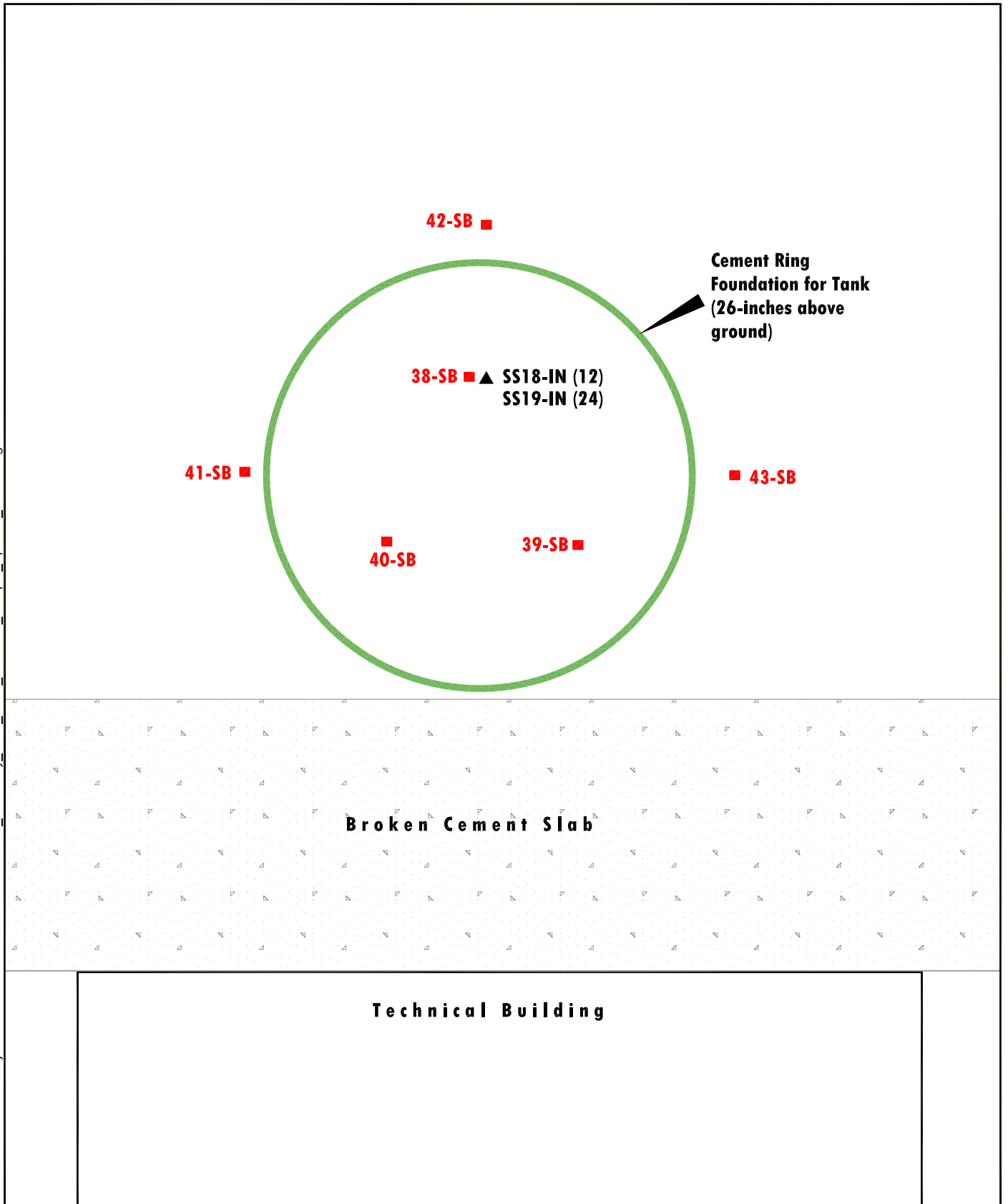
NewFields

 OU2 - Industrial Area Boundary

Proposed Additional  
Soil Sample Areas (OU2)  
Former Frenchtown Mill Site  
Missoula County, Montana  
FIGURE 2



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■ Proposed Soil Sample Locations<sup>1</sup> at Depths of 1, 2, 3, and 4 feet

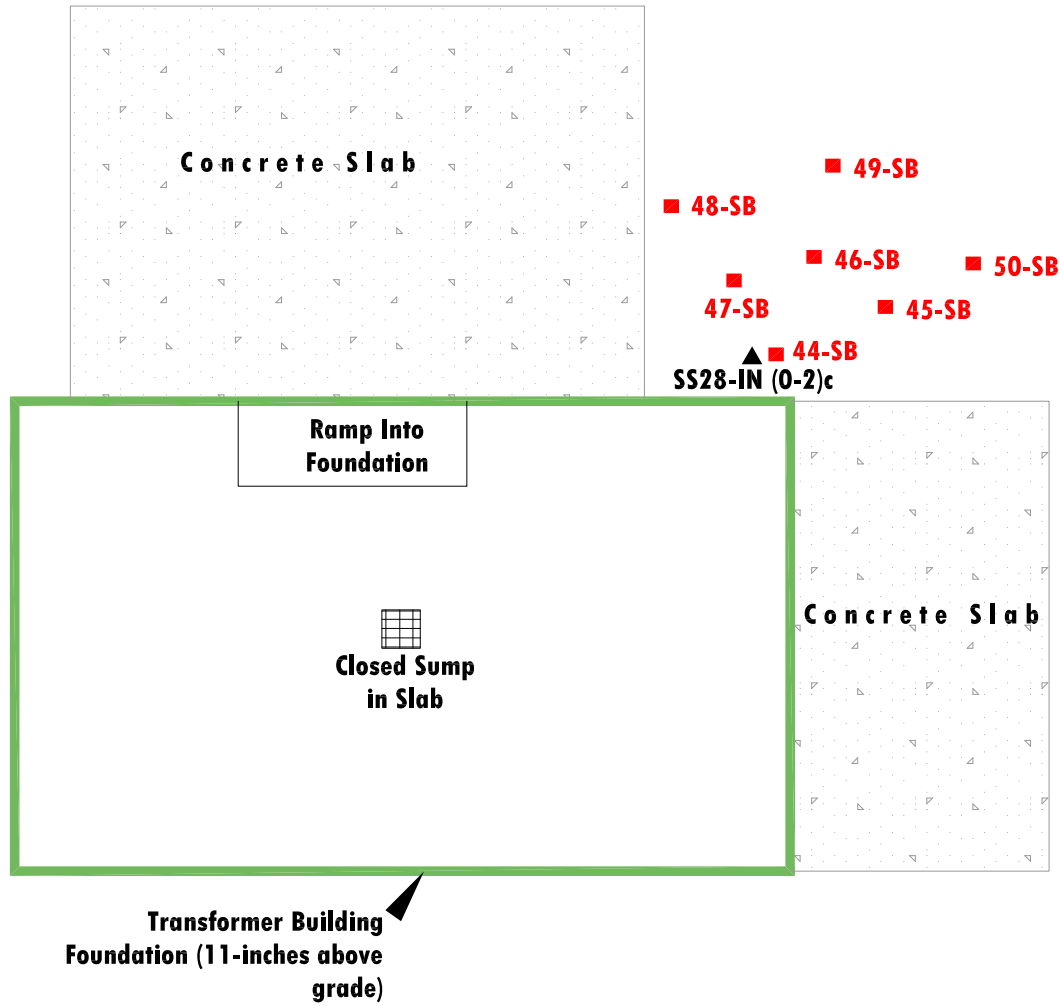
▲ Previous Soil Sample Location

Note:  
Samples will be identified as shown in Table I (i.e., IN-HDPT38-SB1)

**Proposed Soil Sample Locations  
High Density Pulp Tank Foundation  
Former Frenchtown Mill  
Missoula County, Montana  
FIGURE 3**

<sup>1</sup>Actual locations may vary depending on the presence of concrete surfaces

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■ Proposed Soil Sample Locations at Depths of 1, 2, and 3 feet

▲ Previous Soil Sample Location

Note:  
Samples will be identified as shown in Table 1 (i.e., IN-TSB44-SBI)

Proposed Soil Sample Locations  
Transformer Storage Building Foundation  
Former Frenchtown Mill  
Missoula County, Montana  
FIGURE 4



Attachment B  
Table 1

**TABLE 1**  
**Proposed Soil Sampling Locations**  
**HDPT Foundation and TSB Foundation Areas**  
**Former Frenchtown Mill, Missoula County, Montana**

SAMPLE IDENTIFICATION		HIGH DENSITY PULP TANK FOUNDATION AREA										TRANSFORMER STORAGE BUILDING FOUNDATION AREA										
		Soil Sample						Field QA/QC Sample				Soil Sample								Field QA/QC Sample		
		IN-HDPT38-SB	IN-HDPT39-SB	IN-HDPT40-SB	IN-HDPT41-SB	IN-HDPT42-SB	IN-HDPT43-SB	FD1-SO	FD3-SO	ERB1-SO	ERB3-SO	IN-TSB44-SB	IN-TSB45-SB	IN-TSB46-SB	IN-TSB47-SB	IN-TSB48-SB	IN-TSB49-SB	IN-TSB50-SB	FD2-SO	ERB2-SO	DFB1	
SAMPLING DEPTH (feet)	1	A	A	A	A	H	H	---	---	---	---	A	A	A	A	H	H	H	---	---	---	
	2	A	A	A	H	H	H	---	---	---	---	A	H	H	H	H	H	H	---	---	---	
	3	A	A	A	H	H	H	---	---	---	---	H	H	H	H	H	H	H	---	---	---	
	4	H	H	H	H	H	H	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	---	---	---	---	---	---	---	A	H	A	H	---	---	---	---	---	---	---	H	H	A	

Notes:

HDPT = High Density Pulp Tank

TSB = Transformer Storage Building

Samples will be identified by depth in feet below ground surface (i.e., IN-HDPT38-SB1)

Sample locations are shown on **Figure 3** (HDPT) and **Figure 4** (TSB)

QA/QC = Quality assurance, quality control sample

FD-SO = soil sample field duplicate

ERB-SO = soil sample equipment rinse blank

DFB = Deionized water field blank

A = analyze for PCBs (Aroclors) according to EPA method 8082A

H = hold; sample will be extracted but PCB analysis will be based on results of analyzed samples

--- = no sample or not applicable